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BRITISH AND FOREIGN.

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BERTHOLD SEEMANN.

A KEEN observation, a retentive memory, great energy and perseverance, with an extensive acquaintance with many countries, combined to produce in Dr. Seemann a naturalist of a high order, and his extensive scientific knowledge had the advantage of being mainly founded on actual observation. The thoroughly practical character of his mind led him always to try to turn his acquirements to some useful result to mankind, and in the pursuit of such objects he not unfrequently seemed to leave the strict paths of science; in botany, however, though the study of plants was but one among other subjects of interest in his many-sided mind, the scientific aspect was in reality always first. It was his hope and expectation to have soon settled down to steady work at science in England, but he has dared the climate of the tropics once too often, and at the comparatively early age of forty-seven his busy and useful life has ended.

Berthold Seemann was born on February 28th, 1825, at Hanover, being one of a family of whom several, as well as his mother, are still living. He was educated at the Lyceum of his native town, where the head-master at that time was the celebrated Grotefend, one of the earliest decipherers of cuneiform writing. It was from the son of this gentleman that young Seemann received his first lessons in Botany, and this soon became his chief study. He early acquired some aptitude in writing, his first article having been written at the age of seventeen. Two years after this, in 1844, full of a desire to travel in foreign countries, he came to Kew with the object of fitting himself for the work of a botanical collector, and worked in the garden under the then curator, Mr. John Smith. Here he was so fortunate as to gain the good opinion of Sir W. J. Hooker, on whose recommendation he was in 1846 appointed, by the Admiralty, naturalist to H.M.S. Herald, Captain H. Kellett, C.B., which had been employed since June, 1845, on a surveying expedition in the Pacific. This post had become vacant by the untimely death, of Mr. Thomas Edmonston,\* by the accidental discharge of a rifle, at Sua, on

\* See 'Narrative of the Voyage of H.M.S. Herald,' i. p. 67, where is a sketch of the life of this promising botanist. Dr. Seemann named after him (*Edmonstonia*) a plant of tropical South America, which is figured in Bot. Herald, t. 18. It is the *Tetrathylacium* of Poeppig and Endlicher.



the coast of Ecuador, on January 24th, 1846. Leaving England in August, Mr. Seemann went by way of Madeira and the West Indies, and disembarked at Chagres to cross the Isthmus of Panama, at that time a journey of some days. When he reached the city of Panama, in September, he found that the 'Herald' and her consort the 'Pandora' had not returned from Vancouver's Island. Seemann profited by the delay to explore the greater part of the Isthmus, and collected materials which enabled him to produce the most complete general description of that country ever published. He discovered not only a number of new plants and animals, but also some curious hieroglyphics in Veraguas, on which he afterwards read a paper before the Archæological Institute of Great Britain; it has since been shown that there is a remarkable correspondence between these New World antiquities and the ancient rock inscriptions of Northumberland and other parts of Great Britain. When, in the beginning of 1847, H.M.S. Herald returned from the North, Mr. Seemann joined her on January 17th, and remained with her until the completion of her voyage round the world, during which three cruises to the Arctic regions, *viâ* Behring's Strait, were made. Seemann thus had the opportunity of exploring nearly the whole west coast of America, frequently making long journeys inland. His explorations in Peru and Ecuador, when he was accompanied by Mr. (now Captain) Bedford Pim, R.N., led him from Payta through the Peruvian deserts, and across the Cordillera of the Andes to Loja, Cuenca, and Guayaquil, and familiarized him with the magnificent scenery, vegetation, and population of a large section of the former empire of the Incas. Subsequently, he traversed several of the western states of Mexico, starting from Mazatlan, crossing the Sierra Madre, and pushing on to Durango and the borders of Chihuahua. At that time, the Comanche and Alapache Indians were very troublesome, and Seemann narrowly escaped with his life. In 1848, the fate of Sir John Franklin began to excite apprehension in England, and the 'Herald,' accompanied by the 'Plover,' was directed to proceed to the Arctic regions, by way of Behring's Strait, to search for the missing voyagers. This gave an entirely new character to the expedition, which, up to this time, had been used simply for making hydrographical studies of the west coast of America. Three times did the 'Herald' proceed to the Arctic regions, the second year, joined by the 'Enterprise' and 'Investigator,' making valuable discoveries at each visit; a new island was discovered between Asia and America, and the vessel attained a higher latitude than any other had previously accomplished on that side of America. Mr. Seemann availed himself of these opportunities to collect materials for a Flora of the extreme north-west of Arctic America, and for the anthropology of the Esquimaux. In her various voyages, the 'Herald' visited repeatedly Kamtchatka and the Sandwich or Hawaiian Islands; and in 1850 she began her homeward course, touching and remaining for some time at Hongkong, Singapore, Cape of Good Hope, St. Helena, and Ascension, reaching



England on June 6th, 1851. On Sir W. J. Hooker's recommendation, the Admiralty requested Mr. Seemann to publish the results of this voyage, and he accordingly produced, early in 1853, the 'Narrative of the Voyage of H.M.S. Herald, being a Circumnavigation of the Globe and Three Cruises to the Arctic Regions in Search of Sir John Franklin.' This book was in two volumes, and was translated into German, partly by Edward Vogel, the African traveller, and passed through two editions on the Continent. The animals collected during the voyage were described by the late Sir John Richardson in a quarto volume, and in the years 1852-1857 the botanical results appeared in Seemann's 'Botany of the Voyage of H.M.S. Herald.' This contains accounts of the floras of Western Esquimaux-land, the Isthmus of Panama, North-western Mexico, and the island of Hongkong, with 100 plates by Fitch. In the preparation of this book the author had the advantage of the assistance of Sir William and Dr. J. D. Hooker (the latter furnishing the analyses of the plates), which is cordially acknowledged in the preface.

About this time the degree of Ph.D. was conferred on Seemann by the University of Göttingen, and the Imperial German "Academia Naturæ Curiosorum" made him a member under the name of "Bonpland,"—in accordance with the usual practice of the academy. A few years later he was elected Adjunct or Vice-President for life.

In 1853 Dr. Seemann started, in conjunction with his brother W. E. G. Seemann,\* a quarto botanical journal, in German, under the title 'Bonplandia.' This was published in Hanover, though edited in London, and was well supported by botanists of various countries. Its publication was closed on the completion of the tenth volume at the end of 1862. The year 1857 took Dr. Seemann to Canada as official representative of the Linnean Society at the meeting of the American Association for the Advancement of Science at Montreal; on that occasion he read a paper on "Parthenogenesis in Plants and Animals," and took the opportunity of becoming acquainted with British North America and the United States.

In 1859, the Viti or Fiji Islands in the South Pacific Ocean were formally ceded by their king and chiefs to Great Britain; but before accepting the proffered cession, Colonel Smythe, R.A., was commissioned, by our Government, to draw up an official report on the state and condition of these islands, and through the influence of Sir W. J. Hooker Dr. Seemann was asked to join the expedition. Leaving England in February, 1860, Dr. Seemann went, by way of Egypt and Mauritius, to Sydney, touching at King George's Sound and Melbourne, and thence proceeding, in the 'John Wesley' missionary vessel, to Viti, where he arrived some months before Colonel Smythe, and at once commenced exploring this little-known group of islands, collecting information on all points of interest,

\* Died March 3rd, 1868.



and accumulating large collections of plants and other objects of natural history. During his stay of eight months, he became familiar with the whole of the islands, and addressed a series of letters to the 'Athenæum' and 'Gardeners' Chronicle' regarding them. These letters were reprinted in many home and colonial newspapers, and translated into French and German; they gave a vivid picture of Dr. Seemann's dealings and intercourse with the natives; his success in conjunction with Mr. W. T. Pritchard, in saving the lives of five hundred people, who had been doomed to death, to commemorate the coming of age of the son of the Chief Kuruduadua; his ascent of Vorua and Buku Levu, two peaks never before climbed by any white man; of the scenery and vegetation; and of the customs and manners of the cannibal tribes amongst whom he found himself. The substance of the letters, together with much additional matter and Dr. Seemann's official report "On the Resources and Vegetable Products of Fiji," which had been presented to both Houses of Parliament, was incorporated in a separate book published in 1862, under the title of 'Viti: an Account of a Government Mission to the Vitian or Fijian Islands.' A catalogue of all known plants of the group was printed in an appendix to this work, and some new species were described by Seemann in his 'Bonplandia,' but he determined to produce a complete systematic book on the Fijian flora, and, in 1865, commenced the publication of the 'Flora Vitiensis.' This is a quarto, and intended to be completed in ten parts, with a hundred coloured plates by Fitch. Dr. Seemann has not lived to see it as a whole, though he has finished his share in it; nine parts are before the botanical public, and the tenth and concluding number, which includes the Cryptogams by various botanists, and an introduction and appendix, is expected to appear immediately. The 'Flora Vitiensis' contains the results not only of Dr. Seemann's own explorations, but those of all the other expeditions to the South Seas from Captain Cook's first voyage till the present time. It is the first time that the synonymy and characters of these have been properly and faithfully worked up, and Dr. Seemann's book must be the foundation of any future general Flora of the Tropical Pacific islands.

The 'Journal of Botany, British and Foreign' was commenced at the beginning of 1863, on the relinquishment of the 'Bonplandia,' of which it was in some sort a continuation, adapted to the country in which it was published. The first five volumes were published by Mr. Hardwicke, of Piccadilly, and volumes six and seven by Lovell Reeve and Co. As is well known to most of our readers, Dr. Seemann conducted this Journal at a considerable loss, and, at the end of 1869, this loss and his many other engagements determined him to give it up. A strong effort was, however, made by some of the leading English botanists to keep the Journal alive, and Dr. Seemann availed himself of the proffered assistance of Mr. Baker, of Kew, and Dr. Trimen, of the British Museum, in his editorial duties. The last two volumes (eight and nine) have been published by Messrs. Taylor and Co.



From this period the force of circumstances took Seemann more and more away from botanical and scientific work. In 1864 some French and Dutch capitalists availed themselves of his practical experience and intimate knowledge of tropical countries, to report on the resources and capabilities of a portion of the territory of Venezuela. He left Southampton on the 2nd of February, and reached Caracas towards the end of the same month; thence proceeded to Porto Cabello, Chichirividei and Tocuyo, and returned to Europe *viâ* Curaçao and St. Thomas. During this expedition he had the good fortune to discover, on the banks of the Tocuyo, extensive beds of anthracite, closely resembling Welsh steam coal in appearance, and valued in London at thirty shillings per ton.

Dr. Seemann was, however, elected in 1865 Honorary Secretary to the International Botanical Congress, which was held next year in London under the presidency of A. De Candolle; but after devoting himself for some months to the duties of his office, he was reluctantly obliged to tender his resignation, and again to leave England to explore with his former fellow-traveller, Captain Bedford Pim, New Segovia, and other parts of Nicaragua for the Central American Association. He left England in March, 1866, and returned in August with several new plants, which were considerably increased in number during his second visit in the following year. Several interesting letters of Dr. Seemann's from Nicaragua appeared at this time in the 'Athenæum;' these were republished in 1869 with great additions and new material (some of which had, however, appeared in the 'Panama Star and Herald'), and some chapters by Captain Pim, in 'Dottings on the Roadside in Panama, Nicaragua and Mosquito.' One result of these explorations was the purchase by some English capitalists of the Javali gold mine, in the district of Chontales, Nicaragua, and the company were so fortunate as to secure Dr. Seemann's services as managing director. This was most beneficial to the mine, but the result has been disastrous to science. For the last three years of his life, the necessary long and frequent absences from England and attention to business matters isolated Dr. Seemann, and, to his often-expressed regret, greatly interfered with botanical work. Besides the Javali mine, Dr. Seemann had the management of a large sugar estate near Panama. Still his friends, and he himself, hoped that all this was but temporary, and that when the mine had got into thoroughly good order, leisure and opportunity would be found for his return to scientific research.

Dr. Seemann started last summer for Nicaragua with some misgivings, having suffered severely from fever on his last previous visit. He, however, reached Javali at the end of July, after a rough journey through the swamps, in good health, but in the middle of September was seized with fever. From this he never rallied; his death, which happened after three weeks' illness, on October 10th, was somewhat sudden, and under circumstances which pointed towards some cardiac complication. The



next day his body was buried close by his house at the mine, in the little patch of industry and civilization his energy had called into existence in the primeval forest, and surrounded by the tropical vegetation he knew so well.

Besides the books already mentioned, Dr. Seemann was the author of many others. In 1858 he was asked to write the descriptions in English and German to the 'Paradisus Vindobonensis,' a series of eighty-four magnificent plates printed in colours. In 1852, he wrote an enumeration in German of the Acacias cultivated in Europe, with two plates. His 'Popular History of Palms' (1856) is well known, and, translated into German by Dr. Bolle, has passed through two editions in that language. His 'British Ferns at one View' (1860) has been a useful work to amateurs. Among his smaller botanical books may be mentioned 'Hanoverian Customs and Manners in their Relation to the Vegetable Kingdom' (1862) in German, an English translation of Von Kittlitz's 'Twenty-Four Views of the Vegetation of the Coasts and Islands of the Pacific' (1861), and the introduction to Lindley and Moore's excellent 'Treasury of Botany' (1865), besides the 'Popular Nomenclature of the American Flora' (1851), an attempt to collect all the native names of American plants, and the prefaces to several books of travels which he edited. Of detached papers in science, the Royal Society's Catalogue (to 1863) enumerates fifty-eight under Dr. Seemann's name; the first there given is one on descriptive botany in the Regensburg "Flora" for 1844.

But beyond his scientific writings, Dr. Seemann was a very prolific author of articles on subjects of general literature and politics. These are said to amount altogether to several thousands, in English, German and several other languages, which he wrote well. He was also the author of several short dramas, two or three of which have some popularity in Hanover, and of some pieces of music, of which art he possessed a good knowledge. Besides the Academy Nat. Curios., Dr. Seemann was a Fellow of the Linnean, Geographical and other societies in England and abroad; he took particular interest in the Anthropological Society, of which he was vice-president. In botany the groups which more especially engaged his attention were the genera *Camellia* and *Thea* (of which he published a synopsis in Trans. Linn. Soc. vol. xxii.) and other *Ternströmiaceæ*, the *Crescentiaceæ* (which he also monographed in the Trans. Linn. Soc. vol. xxiii.); the *Hederaceæ*, a revision of which Order, reprinted from this Journal, he published as a separate work in 1868; and the *Bignoniaceæ*, with which he intended to have pursued a similar plan. Regel (Gartenflora, iv. p. 183 and t. 126) dedicated to him a beautiful Gesneraceous plant from the Andes, now *Seemannia sylvatica*, Hanst.

Dr. Seemann married an English lady; but had the misfortune to lose his wife a few years ago, during one of his absences in Central America. He leaves an only daughter. A good portrait was published in No. 36



of 'Photographic Portraits of Men of Eminence,' by E. Edwards, B.A., and from the memoir accompanying this, we have largely drawn in the above sketch, as we believe that the facts were communicated by Dr. Seemann himself. The portrait here given is from a photograph taken in Paris in 1863.

## Original Articles.

### THE GENUS ALBIZZIA: ITS ORIGIN AND SYSTEMATIC LIMITS CONSIDERED.

BY BARON FERD. VON MUELLER, C.M.G., M.D., F.R.S.,

*Director of the Botanic Garden of Melbourne.*

It is nearly thirty years ago when Mr. Bentham, on the occasion of writing his celebrated essays on the *Mimoseæ*, rescued the genus *Albizzia* from oblivion.\* The documentary evidence, however, indicating under what circumstances this genus was framed, has remained involved in much obscurity; nor has this uncertainty been cleared away by any of the most recent phytographic writings. Having for several years entertained the view that *Albizzia* and *Pithecolobium* ought to be merged into one genus,† distinct from the legitimate *Acaciæ* only in the concrescence of the stamens, it became necessary to ascertain to which of the two above generic appellations real priority was due. This question could not be solved here, where the comparatively scanty material of our young libraries and museums, however creditable it may be, affords, as yet, for researches of this kind, but very imperfect aid; and I was thus induced to ask my illustrious friend Dr. Giglioli, of Florence, the well-known naturalist of the 'Magenta,' to trace out in the Florentine libraries the precise origin of the genus *Albizzia* and its first record. Although surrounded with multifarious literary work, emanating from his travels, he entered, aided by Dr. Beccari, most obligingly on this task, and the information afforded me is so complete and important, that I offer it at length in his own words:—

"The founder of the genus in question, Dottor Antonio Durazzini, was a Florentine, who lived and wrote in the latter half of the last century. His description of the genus *Albizzia*, which, by the way, is dedicated to an old and noble family, the Albizzi, was read before the still existing Society of the Georgofili, and his communication bears the following title:—'Memoria sull' albero detto volgarmente Julibrissin, letta il dì 5 Agosto 1772, nella Società de' Georgofili dal Sig. Dott. Antonio Durazzini, Socio onorario di tale Accademia.' It is published in the *Magazzino Toscano*, tomo iii., parte iv., o sia volume duodecimo, in Firenze, appresso Pietro Gaetano Viviani, MDCCLXXII. The *Magazzino* was a scientific and literary journal, very little known, and, I suppose, rare to get at now out of Florence. The author begins (at p. 1) with a very

\* Hook. Lond. Journ. of Bot. iii. 84.

† Documents relating to the Intercolonial Exhibition of 1866–1867 at Melbourne, in which, at p. 28, I retained *Pithecolobium* for the united two genera.